



# UNITED STATES PATENT AND TRADEMARK OFFICE

fw  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,126	05/09/2001	Brad Lemley	UTL00047	5220
7590	03/31/2006		EXAMINER	
Kyocera Wireless Corp. P.O. Box 928289 San Diego, CA 92192-8289				DANIEL JR, WILLIE J
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/853,126	<b>Applicant(s)</b> LEMLEY, BRAD
	<b>Examiner</b> Willie J. Daniel, Jr.	<b>Art Unit</b> 2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status [Change]

1)  Responsive to communication(s) filed on 04 November 2005.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-4,6-9 and 11-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-4,6-9 and 11-16 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 04 November 2005 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

i) Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
    Paper No(s)/Mail Date \_\_\_\_\_  
  
4)  Interview Summary (PTO-413)  
    Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

1. This action is in response to applicant's RCE amendment filed on 04 November 2005.

~~1104~~

**Claims 1-4, 6-9, and 11-16** are now pending in the present application. This office action is made **Non-Final**.

### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 November 2005 has been entered.

### ***Drawings***

3. The drawings are objected to because applicant failed to number drawing sheets (see 37 CFR 1.84(t)). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the

brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. This list of examples is not intended to be exhaustive.

### ***Claim Objections***

5. **Claims 1, 3, 6, 8, and 9** are objected to because of the following informalities:

- a. **Claim 1\*** has been amended but Applicant failed to properly mark-up (i.e., strike-through) the language “...said array of keys (strike-through) comprising...” in line(s) 3 of the claim. This limitation (i.e., language) in the amended claim was part of the *previously amended claim 1* but is now omitted from line 3. The Examiner interprets as though the Applicant intended to remove this limitation from the amended claim.
- b. **Claim 1\*** has been amended but Applicant failed to properly mark-up (i.e., strike-through) the language “...proximate to the (strike-through) at least...” in line(s) 16 of the claim. This limitation (i.e., language) in the amended claim was part of the *previously amended claim 1* but is now omitted from line 16. The Examiner interprets as though the Applicant intended to remove this limitation from the amended claim.

- c. **Claim 3** recites the limitation “...the **related** alphanumeric...” in line(s) 8 of the claim. There is insufficient antecedent basis for this limitation in the claim and the claim is being considered as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner interprets as “...the alphanumeric...” as stated in line(s) 3 of the claim. Also, the Examiner requests the applicant to be consistent and use the exact terminology as applicable.
- d. **Claim 6\*** has been amended but Applicant failed to properly mark-up (i.e., strike-through) the language “...switch; **the array of keys including:** (strike-through) a plurality...” in line(s) 17-18 of the claim. This limitation (i.e., language) in the amended claim was part of the *previously amended claim 6* but appears to be replaced by the new language “...switch, **said array comprising:** a plurality...” in line(s) 17-18. The Examiner interprets as though the Applicant intended to include the new language in the amended claim.
- e. **Claim 6\*** has been amended but Applicant improperly provided mark-up (i.e., underline) to the language “...proximate to the at least...” in line(s) 24 of the claim. This limitation (i.e., language) in the amended claim was part of the *previously amended claim 6* but is now indicated with mark-up. The Examiner interprets as though the Applicant did not intend to amend this language of the claim.
- f. **Claim 8** recites the limitation “...the **corresponding** alphanumeric...” in line(s) 8 of the claim. There is insufficient antecedent basis for this limitation in the claim and the claim is being considered as being indefinite for failing to particularly point out

and distinctly claim the subject matter which applicant regards as the invention. The Examiner interprets as "...the alphanumeric..." as stated in line(s) 4 of the claim. Also, the Examiner requests the applicant to be consistent and use the exact terminology as applicable.

g. **Claim 9\*** has been amended but Applicant failed to properly mark-up (i.e., strike-through) the language "...by **the** (strike-through) at least..." in line(s) 3 of the claim. This limitation (i.e., language) in the amended claim was part of the *previously presented claim 9* but appears to be replaced by the new language "...by **said** at least..." in line(s) 3. The Examiner interprets as though the Applicant intended to include the new language in the amended claim.

\*See MPEP § 714 and 37 CFR 1.121(c).

Appropriate correction is required.

6. This list of examples is not intended to be exhaustive. The Examiner respectfully requests the applicant to review all claims and clarify the issues as listed above as well as any other issue(s) that are not listed.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

~~Claims 1-4, 6-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hao (US 6,437,709 B1) in view of Wood et al. (hereinafter Wood) (US 6,810,271 B1), Susumu et al. (hereinafter Susumu) (JP 11-355414 - JPO computer translation), Andre (US 5,950,809), and Suso et al. (hereinafter Suso) (US 6,466,202 B1).~~

Regarding **Claim 1**, Hao discloses a mobile handset keypad comprising an array of keys positioned on a surface of a mobile housing for user interface with the mobile (see abstract; col. 5, line 53 - col. 6, line 24; col. 7, lines 4-11; Figs. 4-15), said array of keys comprising:

a plurality of alphanumeric keys that operate in an alphanumeric mode (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keyboard illustrates having an alphanumeric key;

~~a navigation scheme having at least one integral navigation and alphanumeric key configured to navigate in a navigation mode (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keys provide alphanumeric and navigation operations for the alphanumeric mode and the navigation mode. Hao does not specifically disclose having the features key configured to navigate in a navigation mode through a plurality of menus; an automatic toggling between said navigation mode and the alphanumeric mode comprising: a mode icon in a display indicative of the current mode the mobile handset is in; a corresponding~~

graphical element on said at least one integral navigation and alphanumeric key indicative through illumination of the current mode the mobile handset is in; and at least one illumination source proximate to at least one integral navigation and alphanumeric key, the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode. However, the examiner maintains that the features key configured to navigate in a navigation mode through a plurality of menus; an automatic toggling between said navigation mode and the alphanumeric mode; at least one illumination source proximate to at least one integral navigation and alphanumeric key was well known in the art, as taught by Wood.

In the same field of endeavor, Wood discloses the features key (44) configured to navigate in a navigation mode through a plurality of menus (see col. 2, lines 43-53; Figs. 2-4); an automatic toggling between said navigation mode and the alphanumeric mode (see col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the key (44) provides alphanumeric and character input and cursor and menu navigational movement according to user operation in which the automatically toggles would be inherent to provide character input and cursor and menu navigation as evidenced by the fact that one of ordinary skill in the art clearly recognized;

at least one illumination light which reads on the claimed "illumination source" proximate to the at least one central key (24, 44) which reads on the claimed "integral navigation and alphanumeric key" (see col. 4, lines 31-35; col. 2, lines 43-53,62-64; col. 3,

lines 1-7,43-46; Figs. 2-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Wood to have the features key configured to navigate in a navigation mode through a plurality of menus; an automatic toggling between said navigation mode and the alphanumeric mode; at least one illumination source proximate to the at least one integral navigation and alphanumeric key, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64). The combination of Hao and Wood does not specifically disclose having the features comprising: a mode icon in a display indicative of the current mode the mobile handset is in; a corresponding graphical element on said at least one integral navigation and alphanumeric key indicative through illumination of the current mode the mobile handset is in; the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode. However, the examiner maintains that the feature comprising: a mode icon in a display indicative of the current mode the mobile handset is in was well known in the art, as taught by Susumu.

In the same field of endeavor, Susumu discloses the feature comprising: a mode icon (e.g., figure or cross joint) in a display indicative of the current mode (e.g., input mode or cursor advance mode) the mobile handset is in (see [0014-0016]; Figs. 2-4), where the telephone display illustrates the icon (e.g., figure or cross joint) according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, and Susumu to have the feature comprising: a mode icon in a display indicative of the current mode the mobile handset is in, in order to have the number of keys become fewer, decrease user's operation mistake, and miniaturize the magnitude of telephone, as taught by Susumu (see [0006]). The combination of Hao, Wood, and Susumu does not specifically disclose having the features a corresponding graphical element on said at least one integral navigation and alphanumeric key indicative through illumination of the current mode the mobile handset is in; the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode. However, the examiner maintains that the feature a corresponding graphical element on said at least one integral navigation and alphanumeric key indicative through illumination of the current mode the mobile handset is in was well known in the art, as taught by Andre.

In the same field of endeavor, Andre discloses the feature a corresponding graphical element (e.g., symbol or label) on said at least one key (23) which reads on the claimed "integral navigation and alphanumeric key" indicative through illumination of the current mode (e.g., first or second mode) the mobile telephone (11) which reads on the claimed "mobile handset" is in (see col. 2, lines 12-32,39-40; col. 2, line 66 - col. 3, line 10; Figs. 1-4), where the mobile telephone (11) has two modes of operation in which the keys (23-34) are illuminated with symbols indicating the functions according to the operation mode. The mobile telephone (11) has a polarized light source (47) to illuminate the symbol or label of

the key according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, Susumu, and Andre to have the feature a corresponding graphical element on said at least one integral navigation and alphanumeric key indicative through illumination of the current mode the mobile handset is in, in order to reduce the size of the apparatus and regroup various functions under multifunction keys by having a mode change that selectively lights the keys, as taught by Andre (see col. 1, lines 48-60). The combination of Hao, Wood, Susumu, and Andre does not specifically disclose having the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode. However, the examiner maintains that the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode was well known in the art, as taught by Suso.

In the same field of endeavor, Suso discloses the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode (see col. 7, lines 20-34; col. 11, lines 23-36; Figs. 3a and 8a-b), where the portable information communication unit can operate in different modes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, Susumu, Andre, and Suso

to have the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode, in order to provide a multi-functional information which is excellent in portability, as taught by Suso (see col. 2, lines 13-18).

Regarding **Claim 2**, the combination of Hao, Wood, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 1), in addition Hao further discloses the mobile keypad of claim 1 further comprising a control key which reads on the claimed “toggle key” for toggling between the alphanumeric and the navigation mode manually (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change the operation states of keys between modes.

Regarding **Claim 3**, Hao discloses of the feature wherein said toggling between the alphanumeric mode and the navigation mode (see Hao - col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keys (e.g., key #2, 4, 6, 8 in Fig. 4) are multifunction keys that can provide alphanumeric and navigation function in which the keys are able to change functions by switching or toggling between the alphanumeric and navigation mode. Hao does not specifically disclose the features further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon user interaction with said plurality of menus and input data, said automatic toggling is further configured to update said mode icon and said corresponding graphical element, indicating the related alphanumeric mode or navigation mode. However, the examiner maintains that the feature further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon

~~user interaction with said plurality of menus and input data was well known in the art, as taught by Wood.~~

Wood further discloses the feature further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon user interaction with said plurality of menus and input data (see col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the key (44) provides alphanumeric and character input and cursor and menu navigational movement according to user operation in which the automatic toggling would be inherent to provide character input and cursor and menu navigation as evidenced by the fact that one of ordinary skill in the art would clearly recognized. Wood further discloses the keys include an illumination light (see col. 4, lines 31-35; col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the indicia of the keys would be illuminated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Wood to have the feature further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon user interaction with said plurality of menus and input data, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64). The combination of Hao and Wood does not specifically disclose having the feature said toggling is further configured to update said mode icon and said corresponding graphical element, indicating the related alphanumeric mode or navigation mode. However, the examiner maintains that the feature said toggling is further configured to update said mode icon,

indicating the related alphanumeric mode or navigation mode was well known in the art, as taught by Susumu.

Susumu further discloses the feature said toggling is further configured to update said mode icon (e.g., figure or cross joint), indicating the input mode which reads on the claimed “related alphanumeric mode” or cursor advance mode which reads on the claimed “navigation mode” (see [0014-0016]; Figs. 2-4), where the telephone display illustrates the icon (e.g., figure or cross joint) according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, and Susumu to have the feature said toggling is further configured to update said mode icon, indicating the related alphanumeric mode or navigation mode, in order to have the number of keys become fewer, decrease user’s operation mistake, and miniaturize the magnitude of telephone, as taught by Susumu (see [0006]). The combination of Hao, Wood, and Susumu does not specifically disclose having the feature said corresponding graphical element. However, the examiner maintains that the feature said corresponding graphical element was well known in the art, as taught by Andre.

Andre further discloses the feature said corresponding graphical element (e.g., symbol or label) (see col. 2, lines 12-32,39-40; col. 2, line 66 - col. 3, line 10; Figs. 1-4), where the mobile telephone (11) has two modes of operation in which the keys (23-34) are illuminated with symbols indicating the functions according to the operation mode. The mobile telephone (11) has a polarized light source (47) to illuminate the symbol or label of the key according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, Susumu, Suso, and Andre to have the feature a corresponding graphical element, in order to reduce the size of the apparatus and regroup various functions under multifunction keys by having a mode change that selectively lights the keys, as taught by Andre (see col. 1, lines 48-60).

Regarding **Claim 4**, the combination of Hao, Wood, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 1), in addition Hao further discloses wherein said at least one integral navigation and alphanumeric key (see abstract; col. 5, line 53 - col. 6, line 24; Figs. 4-15) comprises:

a first integral navigation and alphanumeric key comprising an up navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “2” provides up navigation;

a second integral navigation and alphanumeric key comprising a down navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “8” provides down navigation;

a third integral navigation and alphanumeric key comprising a right navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “6” provides right navigation;

a fourth integral navigation and alphanumeric key comprising a left navigation function and an alphanumeric function (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “4” provides left navigation.

Regarding **Claim 6**, Hao discloses a mobile handset (see abstract; col. 5, line 53 - col.

6, line 24; col. 7, lines 4-11; Figs. 4-15) comprising:

a microprocessor and menu display including software routines for creating and displaying a menu (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the portable telephone has a display that shows characters, numbers, and/or menu according to the action of the keys in which the microprocessor would be inherent to provide the functions as evidenced by the fact that one of ordinary skill in art would clearly recognize;

a housing including a front face with openings for touch keys and said display and containing said microprocessor (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the portable telephone has a housing with keys, front face, and a display in which the microprocessor would be inherent to provide the functions as evidenced by the fact that one of ordinary skill in art would clearly recognize;

a plurality of switches within said housing (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the portable telephone has keys in which the switches would be inherent to provide the operation of the each key when pressed or actuated as evidenced by the fact that one of ordinary skill in art would clearly recognize.

~~claim 1~~ a keypad within said housing comprising an array of keys projecting through the openings in the front face of said housing, each interacting with one corresponding switch (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the array of keys correspond to a keypad within the housing that interact with switches to provide input and actions, said array (see abstract; col. 5, line 53 - col. 6, line 24; col. 7, lines 4-11; Figs. 4-15) comprising:

a plurality of alphanumeric keys that operate in said alphanumeric mode (see col. 5, line

53 - col. 6, line 24; Figs. 4-15), where the keyboard illustrates having an alphanumeric key; a navigation scheme having said at least one integral navigation and alphanumeric key configured to navigate in said navigation mode (see col. 5, line 53 - col. 6, line 24; col. 7, lines 4-11; Figs. 4-15), where the keys provide alphanumeric and navigation operations for the alphanumeric mode and the navigation scheme. Hao does not specifically disclose having the features a mode icon in a display, said software configured to automatically activate: said mode icon in said display indicative of the current mode the mobile handset is in; and a corresponding graphical element indicative, through illumination of at least one integral alphanumeric and navigation key, of the current mode the mobile handset is in; an automatic toggling between a navigation mode and an alphanumeric mode; key configured to navigate in a navigation mode through a plurality of menus; at least one illumination source proximate to the at least one integral navigation and alphanumeric key, the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode. However, the examiner maintains that the features an automatic toggling between said navigation mode and an alphanumeric mode; key configured to navigate in a navigation mode through a plurality of menus; at least one illumination source proximate to the at least one integral navigation and alphanumeric key was well known in the art, as taught by Wood.

Wood further discloses the features

an automatic toggling between said navigation mode and an alphanumeric mode (see col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the key (44) provides

alphanumeric and character input and cursor and menu navigational movement according to user operation in which the automatically toggles would be inherent to provide character input and cursor and menu navigation as evidenced by the fact that one of ordinary skill in art would recognize;

key (44) configured to navigate in a navigation mode through a plurality of menus (see col. 2, lines 43-53; Figs. 2-4);

at least one illumination light which reads on the claimed “illumination source” proximate to the at least one central key (24, 44) which reads on the claimed “integral navigation and alphanumeric key” (see col. 4, lines 31-35; col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Wood to have the features an automatic toggling between said navigation mode and an alphanumeric mode; key configured to navigate in a navigation mode through a plurality of menus; at least one illumination source proximate to the at least one integral navigation and alphanumeric key, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64). The combination of Hao and Wood does not specifically disclose having the features a mode icon in a display, said software configured to automatically activate: said mode icon in said display indicative of the current mode the mobile handset is in; and a corresponding graphical element indicative, through illumination of at least one integral alphanumeric and

~~navigation key, of the current mode the mobile handset is in; the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode. However, the examiner maintains that the feature a mode icon in a display, said software configured to automatically activate: said mode icon in said display indicative of the current mode the mobile handset is in was well known in the art, as taught by Susumu.~~

Susumu further discloses the feature a mode icon (e.g., figure or cross joint) in a display, said software configured to automatically activate: said mode icon in said display indicative of the current mode (e.g., input mode or cursor advance mode) the mobile handset is in (see [0014-0016]; Figs. 2-4), where the telephone display illustrates the icon (e.g., figure or cross joint) according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, and Susumu to have the feature a mode icon in a display, said software configured to automatically activate: said mode icon in said display indicative of the current mode the mobile handset is in, in order to have the number of keys become fewer, decrease user's operation mistake, and miniaturize the magnitude of telephone, as taught by Susumu (see [0006]). The combination of Hao, Wood, and Susumu does not specifically disclose having the features a corresponding graphical element indicative, through illumination of at least one integral alphanumeric and navigation key, of the current mode the mobile handset is in; the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the

navigation mode. However, the examiner maintains that the feature a corresponding graphical element indicative, through illumination of at least one integral alphanumeric and navigation key, of the current mode the mobile handset is in was well known in the art, as taught by Andre.

Andre further discloses the feature a corresponding graphical element (e.g., symbol or label) indicative, through illumination of at least one key (23) which reads on the claimed "integral navigation and alphanumeric key", of the current mode (e.g., first or second mode) the mobile telephone (11) which reads on the claimed "mobile handset" is in (see col. 2, lines 12-32,39-40; col. 2, line 66 - col. 3, line 10; Figs. 1-4), where the mobile telephone (11) has two modes of operation in which the keys (23-34) are illuminated with symbols indicating the functions according to the operation mode. The mobile telephone (11) has a polarized light source (47) to illuminate the symbol or label of the key according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, Susumu, and Andre to have the feature a corresponding graphical element indicative, through illumination of at least one integral alphanumeric and navigation key, of the current mode the mobile handset is in, in order to reduce the size of the apparatus and regroup various functions under multifunction keys by having a mode change that selectively lights the keys, as taught by Andre (see col. 1, lines 48-60). The combination of Hao, Wood, Susumu, and Andre does not specifically disclose having the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode. However, the

{b6}

examiner maintains that the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode was well known in the art, as taught by Suso.

Suso further discloses the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode (see col. 7, lines 20-34; col. 11, lines 23-36; Figs. 3a and 8a-b), where the portable information communication unit can operate in different modes.

{b6}

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, Susumu, Andre, and Suso to have the feature the at least one illumination source configured to distinguish between the alphanumeric mode and the navigation scheme by illuminating the at least one integral navigation and alphanumeric key being in the navigation mode, in order to provide a multi-functional information which is excellent in portability, as taught by Suso (see col. 2, lines 13-18).

Regarding **Claim 7**, the combination of Hao, Wood, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 6), in addition Hao further discloses the mobile handset of claim 6 further comprising a toggle key (e.g., control key) for toggling between the alphanumeric and the navigation mode manually (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the control key is a multifunction key to change states between modes.

Regarding **Claim 8**, Hao as applied to claim 6 discloses of the feature said toggling between the alphanumeric mode and the navigation mode (see Hao - col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keys (e.g., key #2, 4, 6, 8 in Fig. 4) are multifunction keys that can provide alphanumeric and navigation function in which the keys are able to change functions by switching or toggling between the alphanumeric and navigation mode. Hao does not specifically disclose the features further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon user interaction with said plurality of menus and input data, said automatic toggling is further configured to update said mode icon and said corresponding graphical element, indicating the corresponding alphanumeric mode or navigation mode. However, the examiner maintains that the feature further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon user interaction with said plurality of menus and input data was well known in the art, as taught by Wood.

Wood further discloses the feature further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon user interaction with said plurality of menus and input data (see col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the key (44) provides alphanumeric and character input and cursor and menu navigational movement according to user operation in which the automatic toggling would be inherent to provide character input and cursor and menu navigation as evidenced by the fact that one of ordinary skill in the art would clearly recognized. Wood further discloses the keys include an illumination light (see col. 4, lines 31-35; col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the indicia of the keys would be illuminated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Wood to have the feature further comprises an automatic toggling between the alphanumeric mode and the navigation mode based upon user interaction with said plurality of menus and input data, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64). The combination of Hao and Wood does not specifically disclose having the feature said toggling is further configured to update said mode icon and said corresponding graphical element, indicating the corresponding alphanumeric mode or navigation mode. However, the examiner maintains that the feature said toggling is further configured to update said mode icon, indicating the corresponding alphanumeric mode or navigation mode was well known in the art, as taught by Susumu.

Susumu further discloses the feature said toggling is further configured to update said mode icon (e.g., figure or cross joint), indicating the input mode which reads on the claimed “corresponding alphanumeric mode” or cursor advance mode which reads on the claimed “navigation mode” (see [0014-0016]; Figs. 2-4), where the telephone display illustrates the icon (e.g., figure or cross joint) according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, and Susumu to have the feature said toggling is further configured to update said mode icon, indicating the corresponding alphanumeric mode or navigation mode, in order to have the number of keys

become fewer, decrease user's operation mistake, and miniaturize the magnitude of telephone, as taught by Susumu (see [0006]). The combination of Hao, Wood, and Susumu does not specifically disclose having the feature said corresponding graphical element. However, the examiner maintains that the feature said corresponding graphical element was well known in the art, as taught by Andre.

Andre further discloses the feature said corresponding graphical element (e.g., symbol or label) (see col. 2, lines 12-32,39-40; col. 2, line 66 - col. 3, line 10; Figs. 1-4), where the mobile telephone (11) has two modes of operation in which the keys (23-34) are illuminated with symbols indicating the functions according to the operation mode. The mobile telephone (11) has a polarized light source (47) to illuminate the symbol or label of the key according to the mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, Susumu, Suso, and Andre to have the feature a corresponding graphical element, in order to reduce the size of the apparatus and regroup various functions under multifunction keys by having a mode change that selectively lights the keys, as taught by Andre (see col. 1, lines 48-60).

Regarding **Claim 9**, Hao discloses the mobile handset of claim 6 wherein the at least one integral navigation and alphanumeric key further includes symbols which reads on the claimed "indicia" thereon (see col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the key includes the symbols (e.g., alphanumeric and direction). Hao does not specifically disclose having the features irradiated by said at least one illumination source comprising a proximate backlighting panel. However, the examiner maintains that the feature irradiated by said at

least one illumination source comprising a proximate backlighting panel was well known in the art, as taught by Wood.

Wood discloses the features irradiated by said at least one illumination light which reads on the claimed “illumination source” comprising a proximate backlighting panel (see col. 4, lines 31-35; col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4). Wood further discloses the keys include an illumination light (see col. 4, lines 31-35; col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the indicia of the keys would be illuminated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao and Wood to have the feature irradiated by said at least one illumination source comprising a proximate backlighting panel, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64). In addition, Andre disclosing having the feature irradiated by said at least one illumination source comprising a proximate backlighting panel. However, the examiner maintains that the feature comprising a proximate backlighting panel was well known in the art, as taught by Andre.

Andre discloses the feature irradiated by said at least one light sources (47) which reads on the claimed “illumination source” comprising a light-emitting diodes (47) which reads on the claimed “proximate backlighting panel” (see col. 2, lines 12-32,39-40,50-60; col. 2, line 66 - col. 3, line 10; Figs. 1-4), where the mobile telephone has an illumination source (47) for lighting the keys.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Wood, Susumu, Suso, and Andre to have the feature irradiated by said at least one illumination source comprising a proximate backlighting panel, in order to reduce the size of the apparatus and regroup various functions under multifunction keys by having a mode change that selectively lights the keys, as taught by Andre (see col. 1, lines 48-60).

Regarding **Claim 11**, the combination of Hao, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 8), in addition Hao further discloses of the feature toggling of said combined navigation and alphanumeric keys into the navigation mode (col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keys (e.g., key #2, 4, 6, 8 in Fig. 4) are multifunction keys that can provide alphanumeric and navigation function in which the keys are able to change functions by switching or toggling between the alphanumeric and navigation mode. The combination of Hao, Susumu, Andre, and Suso does not specifically disclose the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling. However, the examiner maintains that the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling was well known in the art, as taught by Wood.

Wood further discloses the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling (see col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the key (44) provides alphanumeric and character input and cursor and menu navigational movement according to user operation in which the means for sensing (e.g., processor or controller) and automatically toggling would

be inherent as evidenced by the fact that one of ordinary skill in art would clearly recognize.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Susumu, Suso, Andre, and Wood to have the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64).

Regarding **Claim 12**, the combination of Hao, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 11), in addition Hao further discloses of the feature toggling of said combined navigation and alphanumeric keys into the alphanumeric mode (col. 5, line 53 - col. 6, line 24; Figs. 4-15), where the keys (e.g., key #2, 4, 6, 8 in Fig. 4) are multifunction keys that can provide alphanumeric and navigation function in which the keys are able to change functions by switching or toggling between the alphanumeric and navigation mode. The combination of Hao, Susumu, Andre, and Suso does not specifically disclose the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling. However, the examiner maintains that the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling was well known in the art, as taught by Wood.

Wood further discloses the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling (see col. 2, lines 43-

53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4), where the key (44) provides alphanumeric and character input and cursor and menu navigational movement according to user operation in which the means for sensing (e.g., processor or controller) and automatically toggling would be inherent as evidenced by the fact that one of ordinary skill in art would clearly recognize.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hao, Susumu, Suso, Andre, and Wood to have the feature means for sensing user interaction with said plurality of menus and input data enabling the automatically toggling, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64).

Regarding **Claim 13**, the combination of Hao, Wood, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 12), in addition Hao further discloses of the feature means for manually toggling said combined alphanumeric and navigation keys into alphanumeric mode when said menu displays options requiring alphanumeric mode input and into the navigation mode when said menu displays options requiring alphanumeric input and for error correction purposes (see col. 5, line 53 - col. 6, line 24; col. 7, lines 51-62; Figs. 4-15), where the keys (e.g., key #2, 4, 6, 8 in Fig. 4) are multifunction keys that can provide alphanumeric and navigation function in which the keys are able to change functions by switching or toggling between the alphanumeric and navigation mode. Hao further discloses that the portable telephone has a display that shows characters, numbers, and/or menu which would be clearly recognized by one of ordinary skill

in art.

Regarding **Claim 14**, the combination of Hao, Wood, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 6), in addition Hao further discloses additionally comprising a dual function key and associated switch for sending stored dialing information and entering user input when in alphanumeric mode and alternatively selecting menu options when in navigation control mode (see col. 4, lines 21-37; Figs. 4-15), where the “enter key” symbol (i.e., “SEND” key of conventional mobile - see Figs. 2-3 for symbol) provides the function of operation for sending dialing information from a directory or phone list and entering text while in alphanumeric mode and selecting from menu options while in navigation mode for phone operation in which the associated switch and operations would be inherent to provide the key functions as evidenced by the fact that one of ordinary skill in art would clearly recognize.

Regarding **Claim 15**, the combination of Hao, Wood, Susumu, Andre, and Suso discloses every limitation claimed, as applied above (see claim 6), in addition Hao further discloses additionally comprising a dual function key and associated switch for ending a telephone call when in alphanumeric mode and alternatively moving up in the menu hierarchy when in navigation control mode (see col. 6, line 20; Figs. 4-15), where the “clear key” symbol (i.e., “C” key of conventional mobile - see Figs. 2-3 for symbol) provides the function of operation for ending a telephone call while in alphanumeric mode and navigating or moving up to a higher menu while in navigation mode for phone operation in which the associated switch would be inherent as evidenced by the fact that one of ordinary skill in art would clearly recognize.

Regarding **Claim 16**, Hao as applied to claim 4 discloses of the mobile keypad with the features

first integral navigation and alphanumeric key (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “2” provides up navigation and corresponding alphabets;

second integral navigation and alphanumeric key (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “8” provides down navigation and corresponding alphabets;

third integral navigation and alphanumeric key (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “6” provides right navigation and corresponding alphabets;

fourth integral navigation and alphanumeric key (see col. 5, line 53 - col. 6, line 24; Figs. 10-15), where the numeric key “4” provides left navigation and corresponding alphabets.

Hao does not specifically disclose having the features wherein the at least one illumination source comprises: a first illumination source proximate to the first integral navigation and alphanumeric key; a second illumination source proximate to the second integral navigation and alphanumeric key; a third illumination source proximate to the third integral navigation and alphanumeric; a fourth illumination source proximate to the fourth integral navigation and alphanumeric key. However, the examiner maintains that the feature wherein the at least one illumination source was well known in the art, as taught by Wood.

Wood discloses the feature wherein the at least one illumination light which reads on the claimed “illumination source” (see col. 4, lines 31-35; col. 2, lines 43-53,62-64; col. 3, lines 1-7,43-46; Figs. 2-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine the teachings of Hao and Wood to have the feature wherein the at least one illumination source, in order to provide easier movement by allowing the user to keep his or her thumb poised on the navigation key and, every time a numeral is to be pressed, the distance that the user moves his thumb is substantially the same, as taught by Wood (see col. 1, lines 59-64). The combination of Hao and Wood does not specifically disclose having the features comprises: a first illumination source proximate to the first integral navigation and alphanumeric key; a second illumination source proximate to the second integral navigation and alphanumeric key; a third illumination source proximate to the third integral navigation and alphanumeric; a fourth illumination source proximate to the fourth integral navigation and alphanumeric key. However, the examiner maintains that the features comprises: a first illumination source proximate to the first integral navigation and alphanumeric key; a second illumination source proximate to the second integral navigation and alphanumeric key; a third illumination source proximate to the third integral navigation and alphanumeric; a fourth illumination source proximate to the fourth integral navigation and alphanumeric key was well known in the art, as taught by Andre.

Andre further discloses the features comprises:

a first illumination source (47) proximate to the first integral key (23 - “numeric 2”) (see

col. 2, lines 39-40,47-53; col. 2, line 66 - col. 3, line 10; Figs. 1-4);

a second illumination source (47) proximate to the second integral key (23 - “numeric 8”) (see col. 2, lines 39-40,47-53; col. 2, line 66 - col. 3, line 10; Figs. 1-4);

a third illumination source (47) proximate to the third integral key (23 - “numeric 6 key”) (see col. 2, lines 39-40,47-53; col. 2, line 66 - col. 3, line 10; Figs. 1-4);

a fourth illumination source (47) proximate to the fourth key (23 - "numeric 4") (see col. 2, lines 39-40, 47-53; col. 2, line 66 - col. 3, line 10; Figs. 1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time [REDACTED] the invention was made to combine the teachings of Hao, Wood, Susumu, Suso, and Andre to have the features comprises: a first illumination source proximate to the first integral navigation and alphanumeric key; a second illumination source proximate to the second integral navigation and alphanumeric key; a third illumination source proximate to the third integral navigation and alphanumeric; a fourth illumination source proximate to the fourth integral navigation and alphanumeric key, in order to reduce the size of the apparatus and regroup various functions under multifunction keys by having a mode change that selectively lights the keys, as taught by Andre (see col. 1, lines 48-60).

***Response to Arguments***

8. Applicant's arguments with respect to claim 1-4, 6-9, and 11-16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (571) 272-  
[Redacted]  
7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR  
26 March 2006

*Marsha D. Banks-Harold*  
MARSHA D. BANKS-HAROLD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600